

REMARKS

Please reconsider the present application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering the present application.

I. Disposition of Claims

Claims 1-24 were pending in the present application. By way of this reply, claims 21-24 have been canceled without prejudice or disclaimer. Accordingly, claims 1-20 are currently pending in the present application.

II. Amendments to the Drawings

By way of this reply, Figures 5 and 8 have been amended to be consistent with the remaining portions of the Specification. Particularly, Figure 5 has been amended to show that (i) the priority of the communication task is made greater than the priority of the language task when either there is little free space in the network memory or much free space in the work memory and (ii) the priority of the language task is made greater than the priority of the communication task when either there is much free space in the network memory or little free space in the work memory. No new matter has been added by way of these amendments as support for these amendments may be found, for example, in Figure 6 of the present application.

Figure 8 has been amended to show that (i) the occupancy time of the communication task is made greater than the occupancy time of the language task when either there is little free space in the network memory or there is much free space in the

work memory and (ii) the occupancy time of the language task is made greater than the occupancy time of the communication task when either there is much free space in the network memory or there is little free space in the work memory. No new matter has been added by way of these amendments as support for these amendments may be found, for example, on page 20, line 20 – page 21, line 4 and page 21, line 18 – page 22, line 1 of the present application.

III. Amendments to the Specification

By way of this reply, the paragraph beginning on page 11, line 1 and ending on page 11, line 5 has been amended to clarify that “[w]ith a communication task, the print job data may be processed, or the image data buffer 233 may be full.” No new matter has been added by way of this amendment.

Further, the paragraph beginning on page 15, line 14 and ending on page 16, line 6 has been amended to be consistent with the amendments made to Figure 5 of the present application. No new matter has been added by way of these amendments as support for these amendments may be found, for example, in Figure 6 of the present application.

Further, the paragraph beginning on page 16, line 7 and ending on page 16, line 23 has been amended to be consistent with the amendments made to Figure 5 of the present application. Further, this paragraph has been amended to correct a minor typographical error in clarifying that reference number 48 in Figure 4 correctly references the job data monitor. No new matter has been added by way of these amendments as support for these amendments may be found, for example, in Figures 4 and 6 of the

present application.

Further, the paragraph beginning on page 20, line 14 and ending on page 21, line 10 has been amended to be consistent with the amendments made to Figure 8 of the present application. No new matter has been added by way of these amendments as support for these amendments may be found, for example, on page 20, line 20 – page 21, line 4 and page 21, line 18 – page 22, line 1 of the present application.

Further, the paragraph beginning on page 21, line 11 and ending on page 22, line 4 has been amended to be consistent with the amendments made to Figure 8 of the present application. No new matter has been added by way of these amendments as support for these amendments may be found, for example, on page 20, line 20 – page 21, line 4 and page 21, line 18 – page 22, line 1 of the present application.

IV. Rejection(s) under 35 U.S.C § 112

Claims 3 and 13 of the present application were rejected under 35 U.S.C. § 112, second paragraph, as failing to set forth the subject matter which the Applicant regards as the invention. Specifically, the Examiner indicated that claims 3 and 13 were not consistent with the subject matter disclosed in the “Description of the Preferred Embodiments” section of the present application. By way of this reply, the Specification, including Figure 5 of the present application, has been amended to be consistent with claims 3 and 13 in that the priority of the *language* task is altered to be greater than the priority of the *communication* task when the amount of packet data stored in the memory is *below* a specific value. Thus, the Specification, as amended by way of this reply, is now consistent with claims 3 and 13. Accordingly, withdrawal of the § 112, second

paragraph rejections of claims 3 and 13 is respectfully requested.

Further, claims 4 and 14 of the present application were rejected under 35 U.S.C. § 112, second paragraph, as failing to set forth the subject matter which the Applicant regards as the invention. Specifically, the Examiner indicated that claims 4 and 14 were not consistent with the subject matter disclosed in the “Description of the Preferred Embodiments” section of the present application. By way of this reply, the Specification, including Figure 5 of the present application, has been amended to be consistent with claims 4 and 14 in that the priority of the *communication* task is altered to be greater than the priority of the *language* task when the amount of packet data stored in the memory is *over/above* a specific value. Thus, the Specification, as amended by way of this reply, is now consistent with claims 4 and 14. Accordingly, withdrawal of the § 112, second paragraph rejections of claims 4 and 14 is respectfully requested.

Further, claims 6, 7, 16, 17, 22, and 24 of the present application were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. By way of this reply, claims 22 and 24 have been canceled, and thus, the rejection of these claims is now moot.

With respect to claims 6, 7, 16, and 17, the Examiner indicated that the phrase “specific value” describing the condition of the “second memory” is unclear as to its meaning. However, Applicant notes in response that the present application states “[a] job data monitor 48 monitors the amount of print job data stored in the work memory 232 (amount of job data), and orders an interrupt to the CPU 21 if the amount of job data is a specific value.” See Specification, page 13, line 25 – page 14, line 2. Thus, the meaning

of the phrase "specific value" describing the condition of the "second memory" is provided in the present application. Accordingly, withdrawal of the § 112, second paragraph rejections of claims 6, 7, 16 and 17 is respectfully requested.

V. Rejection(s) Under 35 U.S.C § 103

Claims 1-24 of the present application were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,029,238 issued to Furukawa (hereinafter "Furukawa") in view of U.S. Patent No. 6,449,056 issued to Mishima et al. (hereinafter "Mishima"). By way of this reply, claims 21-24 have been canceled, and therefore, the rejection of these claims is now moot. With respect to the remaining claims, for the reasons set forth below, this rejection is respectfully traversed.

The present invention is directed to a printer that dynamically prioritizes various printing tasks dependent on specific conditions. As shown in a flow process of the exemplary embodiment of the present invention shown in amended Figure 5 of the present application, in order to reduce undesired variances in printing results, the relative priorities of a communication task (for receiving packet data from a network) and a language task (for generating image data based on received packet data) are altered depending on the states of a network memory (231 in Figure 4) and a work memory (232 in Figure 4). For example, if, initially, the priority of the communication task is higher than the priority of the language task, and then, subsequently, an interrupt is generated indicating that the amount of packet data stored in the network memory (231 in Figure 4) is at or over a specific value, the priority of the language task is altered to be higher than the priority of the communication task. Accordingly, independent claims 1 and 8-11 of

the present application require the altering, on the basis of specific events, the relative priority sequence based on the priority between the communication task and the language task.

In an alternative embodiment of the present invention as shown by the flow process in amended Figure 8 of the present application, the relative time ratios between the execution time of the communication task and the execution time of the language task are dynamically altered dependent on specific events. Accordingly, independent claims 18-20 of the present application require the altering, on the basis of specific events, the relative time ratio between the execution time in which an execution means is to execute the communication task and the execution time in which the execution means is to execute the language task.

In the Office Action dated October 17, 2003, it is expressly stated that Furukawa does not disclose "alteration means for altering, on the basis of specific events, the relative priority sequence based on the priority between said communication control means and said language control means" as required by independent claims 1 and 8-11 of the present application. Further, for the reasons set forth below, Mishima also fails to disclose at least those limitations of independent claims 1 and 8-11 not disclosed or taught by Furukawa.

Mishima is directed to an image formation apparatus that allows a user to know how much free capacity in an image formation apparatus is required to allow a particular image to be formed. *See* Mishima, column 2, lines 28 – 57. When the memory of the digital copier of Mishima gets full, transmission of next print data from a host computer is stopped until the memory is able to spool off enough information to the printing

mechanism of the copier. However, Mishima is completely silent as to actually altering the relative priorities of the task for receiving data from the host computer and the task for generating image data dependent on the received data. Instead, in Mishima, when a memory associated with the task for receiving data gets full, the copier simply waits until the task for generating image data retrieves enough information from the memory. Thus, the printing flow in Mishima is indeterministic and can vary significantly between various tasks in the printing flow.

In contrast, with regard to the present invention, once a specific value of the memory associated with the task for receiving data is reached, the priorities of the task for receiving data and the task for generating image data are dynamically altered in order to reduce undesired variances in the printing flow. *See* Specification, page 18, lines 18 – 23. Thus, the present invention does not wait for the memory associated with the task for receiving data to become completely full. Thus, Mishima, like Furukawa, fails to disclose altering, based on specific events, the priorities of the communication task and the language task as required by independent claims 1 and 8-11 of the present application.

Similarly, both Furukawa and Mishima are also silent as to altering the time ratio between an execution time of the communication task and an execution time of the language task as required by independent claims 18-20 of the present application.

In view of the above, Furukawa and Mishima, whether considered separately or in combination, fail to show or suggest the present invention as recited in independent claims 1, 8-11, and 18-20 of the present application. Thus, independent claims 1, 8-11, and 18-20 of the present application are patentable over Furukawa and Mishima.



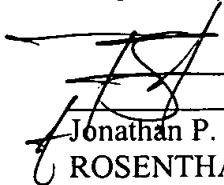
Dependent claims are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

VI. Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 04783.008001).

Date: 1/20/04

Respectfully submitted,


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